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NEW DELHI, SATURDAY, JUNE 12, 1965 (JYAISTHA 22, 1887)

इस भाग में भिन्न पृष्ठ संख्या दी जाती है जिससे कि यह अलग संकलन के रूप में रखा जा सके।

Separate paging is given to this Part in order that it may be filed as a separate compilation

भाग I—खण्ड 3

PART I—SECTION 3

रक्षा मंत्रालय द्वारा जारी किये गये विधिक नियमों, विनियमों, आदेशों और संकल्पों से संबंधित अधिसूचनाएँ
Notifications relating to Non-Statutory Rules, Regulations, Orders and Resolutions issued
by the Ministry of Defence

MINISTRY OF DEFENCE

New Delhi, the 12th June 1965

No. 1364, dated 22nd May 1965.—An examination for admission to the Indian Navy as Special Entry Cadets shall be held by the Union Public Service Commission at such places and on such dates as may be specified in the Notice issued by the Commission in this behalf. The approximate number of vacancies to be offered for entry to the Indian Navy on the results of the examination will be specified in the Notice issued by the Commission.

2. Admission to the Indian Navy will be made on the results of a written examination to be conducted by the Union Public Service Commission and an interview by a Services Selection Board.

3. Candidates who have applied for a commission in any branch in the Army or for Direct entry Commission in the Air Force must exercise their final option before admission to the Indian Navy course. After admission, they will not be considered for any other said Commissions. They will also not be permitted to appear for any interview or examination after they have been finally selected for training.

4. A candidate must be an unmarried male and must either be :—

- a citizen of India, or
- a subject of Sikkim, or
- a subject of Bhutan, or
- a subject of Nepal, or
- a person of Indian origin who has migrated from Pakistan with the intention of permanently settling in India.

Provided that a candidate belonging to categories (d) and (e) above shall be a person in whose favour a certificate of eligibility has been granted by the Government of India, and if he belongs to category (e) the certificate of eligibility will be issued for a period of one year only, after which such a candidate will be retained in service subject to his having acquired Indian citizenship.

Certificate of eligibility will not, however, be necessary in the case of candidates belonging to any one of the following categories :

- Persons who migrated to India from Pakistan before the nineteenth day of July, 1948, and have ordinarily been residing in India since then.
- Persons who migrated to India from Pakistan on or after the nineteenth day of July, 1948, and have got themselves registered as citizens of India under Article 6 of the Constitution.
- Gorkha subjects of Nepal.

A candidate in whose case a certificate of eligibility is necessary may be admitted to the examination and he may also provisionally be admitted to the Academy subject to the

necessary certificate being granted in his favour by the Government.

NOTE.—A widower or a person who has divorced his wife cannot be treated as an unmarried male for the purpose of the above Rule.

5. CANDIDATES SHOULD BE MEDICALLY FIT IN ALL RESPECTS FOR SERVICE IN ANY PART OF THE WORLD. THE STANDARDS OF MEDICAL FITNESS ARE SHOWN IN APPENDIX III TO THE NOTIFICATION.

A NUMBER OF QUALIFIED CANDIDATES ARE REJECTED SUBSEQUENTLY ON MEDICAL GROUNDS. CANDIDATES ARE THEREFORE ADVISED IN THEIR OWN INTEREST TO GET THEMSELVES MEDICALLY EXAMINED BEFORE SUBMITTING THEIR APPLICATIONS TO AVOID DISAPPOINTMENT AT THE FINAL STAGE.

A sufficient number of suitable candidates recommended by the Services Selection Board will be medically examined by a Board of Service Doctors. A candidate who is not declared fit by the Medical Board will not be admitted to the Indian Navy. The very fact that the medical examination has been carried out by a Board of Service Doctors will not mean or imply that the candidate has been finally selected. The proceedings of the Medical Board are confidential and cannot be divulged to anyone. The results of candidates declared unfit/temporarily unfit are intimated to them along with the procedure for submission of fitness certificate and appeal. No requests for the results of Medical Board will be entertained by the President of the Medical Board.

6. Candidates must undertake not to marry until they complete their full training. A candidate who marries subsequent to the date of his application, though successful at this or any subsequent examination, will not be selected for training. A candidate who marries during training shall be discharged and will be liable to refund all expenditure incurred on him by the Government.

7. A candidate for admission to the examination must have attained the age of 17½ years and must not have attained the age of 19½ years on the first day of the month in which the Course for the Indian Navy is due to commence.

The prescribed age limits can in no case be relaxed.

8. A candidate must have passed one of the following examinations or must possess one of the following certificates :—

- the Intermediate or an equivalent Examination of a University or Board approved by the Government of India; or
- the first year Examination under the three-year Degree Course of a University approved by the Government of India; or
- the pre-engineering Examination of the Delhi Polytechnic, Delhi, or of a University approved by the Government of India; or

- (d) the pre-professional/pre-technological Examination of an Indian University or a recognised Board conducted one year after the Higher Secondary or the pre-university stage; or
- (e) the first year Examination under the five-year Engineering Degree course of a University; or
- (f) the Jamia Senior Examination of the Jamia Millia Islamia, Delhi; or
- (g) the Cambridge Higher School Certificate examination; or
- (h) a diploma examination in engineering provided that the examination is taken after a course lasting not less than 2 years subsequent to Matriculation and provided also that the examination is recognised by a State Government for employment under it; or
- (i) general Certificate of Education Examination of London University at 'Advanced' level provided it is passed in at least three subjects; or
- (j) the first year examination of the three years diploma course in Rural Services of the National Council for Rural Higher Education; or
- (k) any other examination which may be recognised by the Union Public Service Commission, as equivalent to the above.

N.B.—The recognition of the qualification mentioned against item (f) above is valid up to 17th September 1965.

NOTE :—A candidate who has appeared at an examination the passing of which would render him eligible to appear at this examination but has not been informed of the result may apply for admission to the examination. A candidate who intends to appear at such a qualifying examination may also apply. Such a candidate will be admitted to this examination, if otherwise eligible, but the admission would be deemed to be provisional and subject to cancellation if he does not produce proof of having passed the examination as soon as possible, and in any case not later than a date which may be fixed by the Union Public Service Commission in this regard.

9. Candidates who were admitted to an earlier course for training as Naval Cadets or for training at the National Defence Academy, Indian Military Academy or Air Force Flying College but were removed therefrom on disciplinary grounds will not be eligible for admission to the Academy.

Candidates who were previously withdrawn on medical grounds from any of these institutions or who left the institutions voluntarily are, however, eligible for admission to the Academy.

Candidates who were previously selected as Special Entry Naval Cadets but were withdrawn from the National Defence Academy or from Naval Training Establishments for lack of officer-like-qualities will not also be eligible for admission to the Academy.

Candidates who were withdrawn from the other institutions for lack of officer-like-qualities will, however, be eligible for admission to the Academy.

10. The decision of the Commission as to the eligibility or otherwise of a candidate shall be final.

11. A candidate found guilty of impersonation or of submitting fabricated documents or documents which have been tampered with, or of making statements which are incorrect or false or suppressing material information, or of using or attempting to use unfair means in the examination hall or otherwise resorting to any other irregular or improper means for obtaining admission to the examination or of misbehaviour in the examination hall, may, in addition to rendering himself liable to a criminal prosecution be debarred either permanently or for a specified period :

- (a) by the Commission from admission to any examination or appearance at any interview held by the Commission for selection of candidates; and
- (b) by the Central Government from employment under them.

12. No candidate shall be admitted to the examination unless he holds a certificate of admission from the Commission.

13. Any attempt on the part of a candidate to obtain support for his candidature by any means may disqualify him for admission.

14. The examination will be conducted by the Commission in the manner prescribed in Appendix II to the Notification.

15. Candidates must pay the fee prescribed in Appendix I to the Notification. No claim for a refund of the fee will be entertained except to the extent stated in that Appendix, nor can the fee be held in reserve for any other examination or selection.

16. The Union Public Service Commission shall prepare a list of candidates in order of merit as disclosed by the aggregate marks awarded to each candidate at the written examination. The candidates who obtain the minimum qualifying marks in the written examination, as fixed by the Commission in their discretion, shall be interviewed by a Services Selection Board. The maximum marks obtainable at Services Selection Board interview will be 900.

To be acceptable, candidates should secure the minimum qualifying marks separately in (i) written examination and (ii) Services Selection Board Test, as fixed by the Commission in their discretion. Subject to this condition, they will then be placed in the order of merit on the basis of the total marks secured in the written examination and the interview. The final selection for admission to the Indian Navy will be made in order of merit subject to medical fitness and suitability in all other respects and number of vacancies available.

Candidates will appear before the Services Selection Board and undergo the test thereat at their own risk and will not be entitled to claim any compensation or other relief from Government in respect of any injury which they may sustain in the course of or as a result of any of the tests given to them at the Services Selection Board, whether due to the negligence of any person or otherwise. Candidates will be required to sign a certificate to this effect on the form appended to the application. In the case of candidates who are minors, the required certificate must be signed by their parents or guardians in the form prescribed. Candidates when called for interview by a Services Selection Board or for subsequent training will be eligible for travelling allowance in accordance with the rules then in force. Candidates who have previously been before a Services Selection Board for the same type of Commission are not entitled to travelling allowance on subsequent occasions.

Success at the examination confers no right of admission to the Indian Navy.

A candidate must satisfy the appointing authority that he is suitable in all respects for admission to the Indian Navy.

NOTE :—The form and manner of communication of the result of the examination to individual candidates shall be decided by the Commission in their discretion, and the Commission will not enter into correspondence with them regarding the result.

17. Candidates finally selected for training at the Academy will be required to deposit the following amount with the Commandant, National Defence Academy on arrival there :—

(a) Candidates not applying for Government financial aid :—	
(i) Pocket allowance for five months Rs. 40-00 per month	Rs. 200-00
(ii) For items of clothing and equipment	Rs. 500-00
TOTAL	Rs. 700-00

(b) Candidates applying for Government financial aid :—

(i) Pocket allowance for two months Rs. 40-00 per month		Rs. 80-00
(ii) For items of clothing and equipment		Rs. 125-00
TOTAL		Rs. 205-00

18. Selected candidates will be appointed as cadets and will undergo one year's training at the National Defence Academy. On completion of this training, they will be required to undergo further training in Ships/Establishments of the Indian Navy.

The duration of the entire period of training (including 1 year at the Academy) will be 3½ to 6½ years depending upon the Branch of the Service to which a cadet is allocated.

19. During the period of their training Cadets of all the Branches are promoted to the rank of Midshipman and Acting Sub-Lieutenant and in the case of Engineering and Electrical Branches they are also promoted to the rank of Sub-Lieutenant (and possibly to the rank of Lieutenant).

20. While at the National Defence Academy, Cadets will be subject to the discipline of the Academy. During training in Ships and Establishments of the Indian Navy they will be subjected to the Indian Navy Act, 1957. During all stages of initial training, Cadets, etc., will be liable to be withdrawn from training and discharged if their progress is found to be unsatisfactory or they are otherwise considered unsuitable.

21. While at the Academy, the cost of Cadets' training including books, uniform, accommodation, boarding and medical treatment will be borne by the Government but the Cadets will be expected to meet their pocket expenses. The pocket expenses of Cadets are likely to be Rs. 40 per month. Where Cadets' parents or guardians are unable to meet wholly or partly even this expenditure, financial assistance up to Rs. 40.00 p.m. may be granted by the Government provided no Cadet whose parent or guardian has an income of Rs. 350.00 or above per month would be eligible for the grant of financial assistance.

A candidate desiring financial assistance should immediately after being finally selected for training at the Academy submit an application through the District Magistrate of his district who will, with his recommendations, forward the application to the Director of Military Training, Army Headquarters, New Delhi.

22. The following scholarships are tenable at the National Defence Academy :—

1. **PARSHURAM BHAU PATWARDHAN SCHOLARSHIP** :—This scholarship is awarded to cadets from Maharashtra and Karnatak. The value of one scholarship is up to a maximum of Rs. 500.00 per annum for the duration of a cadet's stay at the National Defence Academy, subject to the cadet making satisfactory progress. The scholarship will also be available at the Army, Naval or Air Force training establishments where a cadet may be sent for further training after he has completed his training at the National Defence Academy. The cadets who are granted this scholarship will not be entitled to any other financial assistance from the Government.
2. **MAHARAJA JAGADDIPENDRA NARAYAN SCHOLARSHIP** :—This scholarship of the value of Rs. 360.00 per annum is granted to a needy cadet, who fails to secure any financial assistance from the Government and is paid on completion of a term at the National Defence Academy. The scholarship is sanctioned by the Government on a means-cum-merit basis.
3. **COLONEL KENDAL FRANK'S MEMORIAL SCHOLARSHIP** :—This scholarship is of the value of Rs. 360.00 per annum and is granted to a Maratha Cadet who should be the son of an ex-serviceman. The scholarship is in addition to any financial assistance from the Government.
4. **KUER SINGH MEMORIAL SCHOLARSHIPS** :—Two scholarships are awarded to two cadets who obtain the highest position amongst candidates from BIHAR. The value of each scholarship is Rs. 37.00 per mensem tenable for a maximum period of 4 years during the training at the National Defence Academy, KHARAK-VASALA and thereafter at the Indian Military Academy, Dehradun, and the Air Force Flying College and Naval Training Establishments where the cadets may be sent for training on completion of their training at the National Defence Academy. The scholarship will, however, be continued subject to making good progress at the above institution.
5. **ASSAM GOVERNMENT SCHOLARSHIPS** :—With effect from 1st April, 1960, four scholarships have been sanctioned by the Assam Government. These scholarships will be awarded annually to the cadets from ASSAM. The value of each scholarship is Rs. 30.00 per mensem and is tenable for the duration of a cadet's stay at the National Defence Academy. The first two scholarships will be awarded to the two best cadets from ASSAM without any reference to the income of their parents. The other two scholarships will be awarded to any other two cadets from ASSAM whose parents' income is less than Rs. 300.00 per mensem. The cadets who are granted this scholarship will not be entitled to any other financial assistance from the Government.
6. **UTTAR PRADESH GOVERNMENT SCHOLARSHIP** :—This scholarship of the value of Rs. 30.00 per month and an outfit stipend of Rs. 400.00 is awarded to a cadet who belongs to Uttar Pradesh State on merit-cum-means basis and is tenable for a period of three years subject to satisfactory performance by the cadet at the National Defence Academy. The cadet who is granted this Scholarship is not entitled to any other financial assistance from Government.
7. **KERALA GOVERNMENT SCHOLARSHIP** :—One scholarship of the annual value of Rs. 360.00 is awarded for each course at the National Defence Academy during the entire period of training by the KERALA State Government to the student who secures admission to the Academy after passing out from the Rashtriya Indian Military College, DEHRA DUN, and who has been domiciled in the State of KERALA. This scholarship is awarded to the cadet who is not eligible for Government of India assistance and whose parent or guardian has a monthly income below Rs. 500.00 per mensem.

23. Subsequent training in ships and establishments of the Indian Navy is also at the expense of the Government. During the first six months of their training after leaving the National Defence Academy, financial concessions similar to those admissible at the Academy *vide* paragraph 21 will be extended to them. After six months of training in ships and establishments of the Indian Navy when Cadets are promoted to the rank of Midshipman they begin to receive pay and parents are not expected to pay for any of their expenses.

24. Pay and allowance, pension, leave and other conditions of service after the grant of commissions, will be identical with those applicable from time to time to regular officers of the Indian Navy.

25. No candidate will normally be permitted to resign voluntarily, whilst under training.

26. Before a candidate is selected as a cadet in the Indian Navy, his parent or guardian will be required to sign :—

- (a) A certificate to the effect that he fully understands that he or his son/ward shall not be entitled to claim any

compensation or other relief from the Government in respect of injuries/bodily infirmity/death which his son/ward may sustain in the course of or as a result of the training/operation/anaesthesia given to him while under training.

- (b) A bond to the effect that if for any reasons considered with the control of the candidate, he wishes to withdraw for training, or fails to accept a commission, if offered, he will be liable to refund the whole or such portion of the cost of tuition, food, clothing and pay and allowances received, as may be decided upon by Government.

G. ESWARAN, Dy. Secy.

APPENDIX I

Fee

Candidates seeking admission to the examination must pay the following fee with the completed application form :—

Rs. 28.00 (Rs. 7.00 in the case of candidates belonging to Scheduled Castes and Scheduled Tribes).

This amount should be paid by means of a Treasury Receipt or CROSSED Indian Postal Orders payable to the Secretary, Union Public Service Commission. The Commission will not accept payment made otherwise.

2. Once an application has been considered by the Commission and their decision admitting a candidate to the examination communicated to him, no claim from the candidate for a refund of the fee paid by him to the Commission will be entertained, nor can the fee be held in reserve for any other examination or selection. If, however, a candidate is not admitted to the examination by the Commission, a refund of Rs. 15.00 (Rs. 4.00 in the case of candidates belonging to Scheduled Castes and Scheduled Tribes) will be made to him.

3. The Commission may at their discretion remit the prescribed fee where they are satisfied that the applicant is a *bona fide* displaced person from East Pakistan and has migrated to India on or after 1st January, 1964 and is not in a position to pay the prescribed fee.

APPENDIX II

The subjects of the written examination, the time allowed and the maximum marks allotted to each paper will be as follows :—

Subject	Time allowed	Maximum Marks
1. English	2½ hours	250
2. General Knowledge		
Paper I	2 hours	125
Paper II	2 hours	125
3. Mathematics		
Paper I	2 hours	100
Paper II	2 hours	100
4. Physics plus Chemistry		
Paper I	3 hours	100
Paper II	3 hours	100

2. CANDIDATES ARE EXPECTED TO BE FAMILIAR WITH THE METRIC SYSTEM OF WEIGHTS AND MEASURES. IN THE QUESTION PAPERS, WHEREVER NECESSARY, QUESTION INVOLVING THE USE OF METRIC SYSTEM OF WEIGHTS AND MEASURES MAY BE SET.

3. All question papers must be answered in English unless otherwise expressly stated in the question paper.

4. Candidates must write the papers in their own hand. In no circumstances will they be allowed the help of a scribe to write the answers for them.

5. The Commission have discretion to fix qualifying marks in any or all the subjects at the examination.

6. From the marks assigned to candidates in each subject, such deduction will be made as the Commission may consider necessary in order to secure that no credit is allowed for merely superficial knowledge.

7. Deductions up to 5 per cent of the maximum marks for written subjects will be made for illegible handwriting.

8. Credit will be given for orderly, effective and exact expression combined with due economy of words in all subjects of the examination.

SCHEDULE

Standard and Syllabus of the Examination

- (1) **ENGLISH**.—The question will be designed to test the candidate's understanding and command of the language. Amongst other test a passage will be set for the precis.
- (2) **GENERAL KNOWLEDGE**.—There will be two papers. Paper I—dealing mainly with Current Affairs and History.

Paper II—dealing with Science and Geography.

The following syllabus is designed to indicate the scope of each subject included in these papers. The topics mentioned are not to be regarded as exhaustive and questions on topics of similar nature not mentioned in the syllabus may also be asked. Candidates' answers are expected to show their intelligent understanding of the question and not detailed knowledge of any text book.

PAPER I

Current Affairs.—Knowledge of important events that have happened in India during the past two years. India's system of Government. Important measures of legislation whether undertaken by the Parliament or State Legislatures. Broad questions of India's policy relating to foreign affairs. Questions set will test the factual knowledge of candidates.

World events of international importance, important personalities, both Indian and foreign. Sports and other cultural activities of outstanding importance.

Indian History.—Broad outline knowledge of Indian History. Knowledge of India's ancient culture and civilization as disclosed by monuments, ancient buildings and masterpieces of literature. Growth of self-Government. Main stages in the national movement leading to independence.

World History.—Elementary knowledge of major events in world history. Reforms or national movements such as represented by the French Revolution, the Industrial Revolution in the U.K., the American War of Independence, the foundation of U.S.S.R., World Wars I and II, modern freedom movements in Asia.

PAPER II

Science—

Physics.—Physical properties and states of matter and simple measurements of mass, weight, density and specific gravity. Motion of object. Velocity, acceleration, force, gravity. Effects of heat, measurement of temperature, transference of heat, change of state.

Rectilinear propagation of light, phenomenon of reflection and refraction.

Natural and artificial magnets—Properties of a magnet.

Electricity, static and current, conductors, and non-conductors, heating, lighting and magnetic effects of currents.

Chemistry.—Physical and chemical changes; elements, mixtures and compounds; chemical properties of air; chemical composition of water, preparation and properties of Oxygen, Hydrogen and Nitrogen; Acids, Bases and Salts; Carbon, Coal, Carbon-dioxide.

General.—Elementary knowledge of the human body and its important organs. Names and uses of the common animals, trees, plants, flowers, birds and minerals.

Common epidemics, their causes, means of prevention and cure.

Eminent Scientists, and their achievements.

Geography.—The shape and movements of the Earth, Time, Night and Day and the seasons. Climate and Weather—the main, climate and vegetation regions, The Earth's crust erosion, transportation and deposition; earthquakes and volcanoes. Tides and Ocean currents; Maps.

Human occupations and activities in relation to geographical factors.

The Geography of India with special reference to the above.

(3) MATHEMATICS

PAPER I

Algebra.—Standard Formulae and their application; Factors, Surds, Laws of Indices, Quadratic equations in one unknown (including graphical methods), Arithmetical and Geometrical Progressions (only finite series), Permutation and combination, Binomial Theorem (Any index), partial Fractions and Logarithms.

Mensuration.—Areas of Plane figures. Volumes and Surfaces of Cubes, Cylinders, Pyramids Cones and Spheres.

Co-ordinate Geometry.—Distance, formula Section formula, equation of straight line, conditions of parallelism and perpendicularity, Length of perpendicular from point to a line. Angle between two lines—concurrence. Standard forms of the equation of a circle—Tangents and Normals.

PAPER II

Trigonometry.—Trigonometrical ratios and their graphs, addition theorems; Identities; Use of four figure tables; Simple trigonometrical equations; Solutions of triangles; Heights and distances.

Calculus.—Derivatives of standard forms; Successive derivatives; Applications of the notion of derivative to geometry, mechanics and physics, simple cases of maxima and minima of functions of a single variable.

Integration of standard forms and questions based on them, integration by substitution and by parts; integration of rational functions.

Mechanics.—Composition and resolution of forces in one plane; Moments; Simple graphical methods; simple cases of equilibrium; Centre of gravity; Work; Velocity ratio, mechanical advantages and efficiency of a machine; Levers, pulleys, balances and other simple machines.

Rectilinear motion under uniform accelerations; graphical treatment of velocities and accelerations; composition and resolution of velocities and accelerations in a plane; conservation of linear momentum and energy; Work and power.

NOTE :—Proofs of the parallelogram and triangle of forces and of the principle of moments will not be asked. Questions will not be set on curvilinear motion.

(4) PHYSICS PLUS CHEMISTRY.—Two question papers will be set. One paper will be two-third Electricity and one-third Chemistry and the other paper two-third Physics other than Electricity and one-third Chemistry. In each paper candidates will be required to answer a question in Chemistry but a choice of question will be given so that full marks may be scored without a knowledge of Organic Chemistry.

PHYSICS

Paper I—Section I.

Electricity and Magnetism.—The Fundamental ideas concerning electrical currents, difference of potential, resistance construction and mode of action of the primary and secondary batteries. The laws of electrolysis and their application in secondary cells and electroplating. Heating effect of current; its application in incandescent and arc lamps; electric welding, cooking etc. Laws of magnetism permanent and induced magnetism in iron; molecular theory of magnetism, pole strength and definition of unit pole fields of magnetic force and the calculation of field intensity; the magnetic field associated with electric current. The construction and action of an electromagnet; application in electric bells and telephones. Laws of electromagnetic induction, broad principles and their applications to the induction coil, magneto, dynamo and motor. The fundamental ideas concerning wireless telegraphy. The simple methods of measuring electric current difference of potential and resistance, practical definitions of ampere, volt and ohm; Ohm's Law and its application to circuits. Construction and mode of action of simple measuring instruments, electric transmission of power by direct current; joule, watt. Board of Trade Unit of electrical energy.

Paper II—Section I.

General Physics.—General Principle of measurement, Elementary mechanics; equation of Motion, Laws of Motion, equilibrium of coplanar forces, projectiles work, power and Energy; Properties of matter—Solids, Liquids and Gases; Archimedes principle, Law of floating bodies; Air and Water pumps and other simple instruments.

Heat.—Temperature, Thermometer, Expansion of solids and Liquids, Gas Laws; Specific Heat and its measurements, Latent Heat and its measurement; Vapour pressure; Hygrometry, Mechanical Equipment of Heat; Modes of Transference of Heat.

Optics.—Transmission, Reflection and refraction of light; Prisms and lenses; Formation of images by mirrors and lenses; Elementary principles of optical instruments like telescopes and microscopes. The eye; Spectacles; Intensity; Principles of Illumination; Photometry; Dispersion; Spectroscopy; Colour.

CHEMISTRY

Paper I—Section II.

Inorganic Chemistry.—The Chemical properties of oxygen, hydrogen, nitrogen, chlorine, carbon, sulphur, phosphorus and their common compounds. The general characteristics and behaviour of the metal, potassium, calcium, aluminium, copper, zinc, mercury, tin, lead and iron. The preparation (without technical details) and uses of chemicals of industrial importance, such as oxygen, soda, sulphuric acid, coal gas and one of the more important metals.

Paper II—Section II.

General Chemistry.—Elements, compounds and mixtures, Laws of chemical combination, Equivalent, molecular and atomic weights. Structural formulae and valency. Outlines of the properties of solutions. Heat of reaction.

Organic Chemistry.—Outlines of the Chemistry of the simple compounds containing not more than two carbon atoms directly connected. An elementary knowledge of the properties of benzene and its simpler derivatives. The part played by carbon compounds in the life of animals and plants, fats, soap, starch, and sugar, treated descriptively. Carbon compounds as source of energy.

INTELLIGENCE AND PERSONALITY TEST

In addition to the interview the candidates will be put to Intelligence Tests both verbal and non-verbal designed to assess their basic intelligence. They will also be put to Group Tests, such as group discussion, group planning, outdoor group tasks, and asked to give brief lectures on specified subjects. All these tests are intended to judge the mental calibre of a candidate. In broad terms, this is really an assessment not only his intellectual qualities but also his social traits and interest in current affairs.

APPENDIX III

Physical Standards for Admission as special Entry Cadets in the Indian Navy

To be passed fit for admission to the Indian Navy, a candidate must be in good mental and bodily health and free from any defect likely to interfere with the efficient performance of duty.

2. The following points are to be particularly observed :—

- (a) that there is no evidence of weak constitution, imperfect development, serious malformation or obesity;
- (b) that there is no disease or impairment of function of the bones and joints;
- (c) that there is no malformation of the head, deformity from fracture or depression of the bones of the skull;
- (d) that there is no impediment of speech;
- (e) that there is no impaired hearing, discharge from or disease of either ear, unhealed perforation of the tympanic membranes or signs of acute or chronic suppurative otitis media or evidence of radical or modified radical mastoid operation;
- (f) that there is no disease of the bones or cartilages of the nose, nasal polypus or disease of the naso-pharynx and accessory sinuses;
- (g) that there are no enlarged glands, tubercular or due to other diseases, in the neck and other parts of the body and that the thyroid gland is normal.

NOTE.—Scars of operations for the removal of tuberculous glands are not a cause for rejection provided that there has been no active disease within the preceding 5 years and the chest is clinically and radiologically clear;

- (h) that there is no disease of the throat, palate tonsils or gums or any disease or injury affecting the normal function of either Mandibular joints;

NOTE.—Simple hypertrophy of the tonsils, if there is no history of attacks of tonsillitis, is not a cause for rejection.

- (i) that there is no sign of functional or organic disease of the heart and blood vessels;
- (j) that there is no evidence of pulmonary tuberculosis or previous history of this disease or any other chronic disease of the lungs.
- (k) that there is no evidence of any disease of the digestive system. The liver and spleen should not be enlarged and there is no abdominal tenderness on palpitation;
- (l) that there is no hernia or tendency thereto;
- (m) that there is no hydrocele, varicocele or any other disease or defect of the genital organs;
- (n) that there is no disease of the kidneys. Cases showing albuminuria or glycosuria will not be accepted;
- (o) that there is no fistula and/or fissure of the anus or evidence of haemorrhoids;
- (p) that there is no skin disease unless temporary or trivial. Scars which by their extent or position cause or are likely to cause disability or marked disfigurement are a cause for rejection;
- (q) that there is no congenital, active or latent venereal disease;
- (r) that there is no history or evidence of mental disease. Candidates with history of fits, in continuance of urine or ENURESIS will not be accepted;
- (s) that there is no squint or any morbid condition of eye or of the lids that is liable to a risk of aggravation or recurrence;
- (t) that there is no active Trachoma or its complications and sequelae.

NOTE.—Remedial operations are to be performed prior to entry. No guarantee is given of ultimate acceptance and it should be clearly understood by the candidate that the decision whether an operation is desirable or necessary is one to be made by his private medical adviser. The Government will accept no liability regarding the result of operation or any expense incurred.

3. Standards for Height, Weight and Chest measurements.

- (a) Height.—The minimum height for a candidate of 18 years of age is 157 cm. except where otherwise stated. In case of Gorkhas, Nepalese, Assamese and Garhwalis candidates, the minimum height may be reduced by 5 cm.
- (b) Weight.—A table showing correlation between age, height and average weight is given below for guidance of the examining Medical Officer/Medical Board :

Age period	16-17	18-19	20-21
Height centimeters	Weight (kg.)	Weight (kg.)	Weight (kg.)
157	45	47	49
160	47	48	50
162	48	50	52
165	50	52	53
168	52	53	55
170	53	55	57
173	55	57	59
175	57	59	61
178	59	61	62
180	61	63	64
183	63	65	67

NOTE.—Height and weight as shown above are for men fully stripped. It is not possible to lay down precise standards with regard to height and weight. This is left to the discretion of the Recruiting Medical Officer/Medical Board who may select candidates below height/weight who in his/their opinion would acquire the necessary height/weight standards on attaining the age of 18/completion of training. However, the minimum height on selection should not be less than 152 cm. The same applies to chest measurement and expansion but the minimum range of expansion should preferably be 5 cm.

- (c) Chest.—The chest should be well proportioned and well developed with a minimum range of expansion of 5 cm.

4. It should be ensured that sufficient number of sound natural teeth for efficient mastication are present.

(a) In order to assess the dental condition of an individual, teeth in good opposition with corresponding teeth in the other jaw will be allotted points as follows :—

- (i) Central incisor, lateral incisor, canine, 1st and 2nd Premolar and underdeveloped 3rd Molar—1 point each.
- (ii) 1st and 2nd molar and fully developed third Molar—2 points each.

When all 32 teeth are present, there will be a total count of 22 points.

(b) The following teeth on each side of the jaw in good functional opposition must be present :—

- (i) Central incisor, lateral incisor, canine—At least two must be present.
- (ii) 1st Premolar, 2nd Premolar—At least two must be present.
- (iii) 1st Molar, 2nd Molar, 3rd Molar—At least two must be present.

(c) A candidate must have a minimum of 14 dental points to be acceptable.

(d) Candidates suffering from severe pyorrhoea will be rejected. Where the state of pyorrhoea is such that in the opinion of Dental Officer, it can be cured without extraction of teeth, the candidate may be accepted.

5. An X-Ray examination of chest will be carried out. Any defects or disability discovered during this examination will disqualify a candidate from entry into the Service.

Eye Sight Standard

Distant Vision without glasses	Near Vision without glasses	Colour perception standard
6/6	Each eye D-0.5 smaller	1

NOTE 1.—Relaxation in respect of Engineering, Electrical and Supply Branches up to 6/18, 6/36 correctable to 6/6 will be permissible for a limited number of otherwise meritorious candidates, subject to the proviso that they will continue to serve in the Branches chosen on entry.

NOTE 2.—Candidates for Executive Branch, who fail to secure night vision standard 11 (eleven) are to be rejected.

6. Acceptable defects at entry.—Candidates for entry into the Navy presenting mild degree of the following defects may be accepted :—

- (a) slight degree of varicocele;
- (b) knock knee with a separation of legs less than two inches of internal malleoli;
- (c) defective gait not affecting walking or running;
- (d) partly flexible flat feet with only a short history of foot strain;
- (e) healed and dry perforation in the ear drum if the hearing is good;
- (f) III & IV degree trachoma without entropion;
- (g) mild curvature of leg not affecting walking or running;
- (h) mild hammer toe with no history of trouble;
- (i) slight stammering but not affecting expression;
- (j) mild degree of varix;
- (k) any other slight defect which in the opinion of the Medical Officer will not interfere with the individuals efficiency as an officer or sailor.

